



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

SW

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/595,325	06/16/2000	Jiyue Zeng	976-26-1	1299
996	7590	12/13/2004	EXAMINER	
GRAYBEAL, JACKSON, HALEY LLP 155 - 108TH AVENUE NE SUITE 350 BELLEVUE, WA 98004-5901			GANNEY, STEVEN J	
			ART UNIT	PAPER NUMBER
			3752	

DATE MAILED: 12/13/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**SUPPLEMENTAL**  
**Office Action Summary**

Application No.

09/595,325

Applicant(s)

ZENG, JIYUE

Examiner

Steven J. Ganey

Art Unit

3752

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 16 August 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-14 and 16-28 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 24-26 is/are allowed.
- 6) ☒ Claim(s) 1-14, 16--22, 27 and 28 is/are rejected.
- 7) ☒ Claim(s) 23 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☒ Interview Summary (PTO-413)  
Paper No(s)/Mail Date 12/1/04
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

Art Unit: 3752

### **SUPPLEMENTAL DETAILED ACTION**

1. A supplemental Office action is presented and action on the merits of all the claims of record follows. The action mailed on September 9, 2004 is withdrawn.

#### ***Continued Examination Under 37 CFR 1.114***

2. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on August 16, 2004 has been entered.

#### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 11-13 and 16-19 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Abrasive Jet Nozzle Assembly Drawing, John Olsen, June 18, 1994.

The Abrasive Jet Nozzle Assembly Drawing, John Olsen, June 18, 1994, discloses all the feature elements of the instant invention.

Art Unit: 3752

5. Claims 27 and 28 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Hashish et al '085.

Hashish et al '085 discloses all the feature elements of the instant invention. See Figures 3, 3a and 7.

6. Claims 20 and 21 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Chalmers.

Chalmers discloses all the feature elements of the instant invention. See Figures 2 and 9.

7. Claims 20 and 21 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Erichsen et al.

Erichsen et al discloses all the feature elements of the instant invention. See Figures 3A and 3B.

### ***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 11-14 and 16-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hashish et al '085 in view of Abrasive Jet Nozzle Assembly Drawing, John Olsen, June 18, 1994.

10. Hashish et al '085 shows an assembly for use with a fluid jet cutting nozzle comprising a removable orifice body 24a; a nozzle body 92; a first/central bore 40a/42a;

Art Unit: 3752

a mixing cavity 30a; a second/inlet bore 58a; a jewel 32a in a recess; mixing tube 28a; a high pressure cavity 108 with cylindrical side wall, a bottom wall normal to the axis of the central bore and a generally quarter circle curvilinear transition portion, see Figure 7; and a soft seal 112, except for a cylindrical nozzle guard coaxial with and encircling the mixing tube. The Abrasive Jet Nozzle Assembly Drawing, John Olsen, June 18, 1994, shows a nozzle guard 10 coaxial with and encircling a mixing tube 1. It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide a nozzle guard in the apparatus of Hashish et al '085, as taught by the drawing, since such a modification would protect the mixing tube from being inadvertently damaged. Claims 11-14 and 16-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hashish et al '085 in view of Abrasive Jet Nozzle Assembly Drawing, John Olsen, June 18, 1994.

11. Claims 20-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hashish et al '085 in view of Chalmers.

Hashish et al '085 shows an assembly for use with a fluid jet cutting nozzle, except for an inclined bore at 45 degrees. Chalmers shows a water jet cutting device with an inclined bore 79. It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the bore for abrasive material of Hashish et al '085 with an inclined bore of 45 degrees, as taught by Chalmers, since with such a modification the abrasive material enters tangentially and would enhance mixing with the water.

Art Unit: 3752

*Allowable Subject Matter*

12. Claims 24-26 are allowed.
13. Claim 23 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

*Conclusion*

14. All claims are drawn to the same invention claimed in the application prior to the entry of the submission under 37 CFR 1.114 and could have been finally rejected on the grounds and art of record in the next Office action if they had been entered in the application prior to entry under 37 CFR 1.114. Accordingly, **THIS ACTION IS MADE FINAL** even though it is a first action after the filing of a request for continued examination and the submission under 37 CFR 1.114. See MPEP § 706.07(b). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Art Unit: 3752

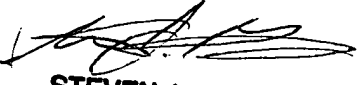
15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven J. Ganey whose telephone number is (571) 272-4899. The examiner can normally be reached on Monday, Tuesday, Thursday and Friday from 8:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dave Scherbel, can be reached on (571) 272-4919. The fax phone number for this Group is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-1113.

sjg

12/9/04

  
**STEVEN J. GANEY**  
**PRIMARY EXAMINER**  
12/9/04